

# PATENT COOPERATION TREATY

Rec'd PCT/PTO 11 FEB 2005

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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File 76015

24 NOV 2004

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NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

22.11.2004

Applicant's or agent's file reference  
31.13.76015

## IMPORTANT NOTIFICATION

International application No.  
PCT/EP 02/09021

International filing date (day/month/year)  
12.08.2002

Priority date (day/month/year)  
12.08.2002

Applicant  
BOREALIS TECHNOLOGY OY et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 31.13.76015	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 02/09021	International filing date ( <i>day/month/year</i> ) 12.08.2002	Priority date ( <i>day/month/year</i> ) 12.08.2002
International Patent Classification (IPC) or both national classification and IPC G01N21/35		
Applicant BOREALIS TECHNOLOGY OY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:
- I ☒ Basis of the opinion
  - II ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV ☐ Lack of unity of invention
  - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI ☐ Certain documents cited
  - VII ☐ Certain defects in the international application
  - VIII ☐ Certain observations on the international application

Date of submission of the demand  12.03.2004	Date of completion of this report  22.11.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Stuebner, B  Telephone No. +49 89 2399-2179 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 02/09021**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-19 as originally filed

**Claims, Numbers**

8-16 received on 18.10.2002 with letter of 15.10.2002

1-7 filed with telefax on 08.11.2004

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 02/09021**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. The following documents (D) are referred to in this report:

D1: EP-A-0 899 556 (GEN ELECTRIC) 3 March 1999 (1999-03-03)  
D2: WO 02 054048 A (CROONENBORGHES JOS ;VAN STEERTEGHEM LUC (BE);  
BOON PAUL (BE); BOREA) 11 July 2002 (2002-07-11)  
D3: WO 02 052243 A (BOREALIS TECH OY ;JACKSON ROBERT PATRICK (GB);  
EGGEN SVEIN (NO); E) 4 July 2002 (2002-07-04)  
D4: US-A-4 852 028 (AMPLER LEIF ET AL) 25 July 1989 (1989-07-25)  
D5: US-A-4 742 228 (BISCHOFF BRUNO) 3 May 1988 (1988-05-03)  
D6: US-A-5 459 318 (CACHO MIGUEL A ET AL) 17 October 1995 (1995-10-17)

2. As far as Claim 1 is understood (see chapter 4), from D1 (see e.g. col.1, para.1; col.2, para.7; col.4, para.12 to col.5, para. 13; col.8, para.24 to col.9, para.27; Fig.1) nearly all method steps of Claim 1 are known.

Claim 1 differs therefrom, that the "bulk property of the product so far produced" is monitored.

That is, in D1 is not explicitly disclosed that properties measured refer to an average or aggregate property but D1 rather appears to disclose an immediate measurement of the property of the polymer currently being sampled.

However, D1 discloses "monitoring and controlling of manufacturing processes" (col.1, ll.7, 8) and that the "data may be used as an input for the determination of viscosity on a continuous basis" (see col.8, ll.19-21).

Such a continuous monitoring may also include the determination of the "bulk property".

At least, the skilled person having the object to provide data of the bulk property in addition to the product properties would obviously determine the bulk property of the product so far produced. There is no reason why he should be prevented from doing so in order to solve the problem posed.

Also in D2 and D3 all the above-mentioned features are disclosed, which documents have been filed by the same applicant as in the present case.

Consequently, Claim 1 as well as the corresponding independent method Claim 9 and apparatus Claim 10 do not involve an inventive step.

3. Furthermore, many features of the dependent claims are known per se or obvious from the state of the art; see the citations in the Search Report.  
Dependent Claims 2-8 and 11-16 do therefore not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step.

4. Clarity of claims:

Furthermore, from the wording of Claim 1 the difference of "product property" and "bulk property" is not clear.

Corresponding objections apply to apparatus Claim 10.

From Claim 9 it is not clear what the meaning of "aggregate properties" may be. If "aggregate" and "bulk" property should be the same, then only one technical term should consistently be used in the claims.

5. If, in spite of the above-mentioned objections, the applicant wishes to proceed further in the regional phase, the following additional points should be noted, i.e. the corresponding amendments provided:
  - 5.1 Documents D1 to D6 should be mentioned and their contents briefly commented on in the introductory part of the description.
  - 5.2 The introductory part of the description should contain statements agreeing with any independent claim submitted.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/EP 02/09021

- 5.3 Any new independent claim should be submitted in the two-part form set out in Rule 6.3 (b) PCT.
- 5.4 In the new set of claims reference signs should be inserted in brackets following those features which are so numbered in the figures (Rule 6.2 (b) PCT).
- 5.5 If new features are taken into the claims, Article 19 (2) of the PCT should not be infringed and it would probably accelerate the examining process if it were indicated from which part of the application any such features are taken.

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DT01 Rec'd PCT/PTO 11 FEB 2005

20

Claims

1. A method of monitoring a bulk property of a product during its production comprising the steps of:
- 5 a) making repeated on-line measurements of samples of the product to obtain data related to a product property; and
- b) using this data, determining a bulk property of the product so far produced.
- 10 2. A method as claimed in claim 1 wherein repeated or continuous determination of the bulk property is made throughout the production of the batch.
- 15 3. A method as claimed in claim 2, wherein the bulk property thereby determined is used to assist in controlling the production plant.
- 20 4. A method as claimed in claim 1, 2 or 3, wherein the measurements of step (a) are made sufficiently frequently to follow significant fluctuations in product quality.
- 25 5. A method as claimed in claim 4, wherein the sampling frequency is at least twice the frequency of anticipated significant changes in the product property being tested
- 30 6. A method as claimed in claim 4 or 5, wherein a measurement is taken at least every 10 minutes.
7. A method as claimed in claim 6 wherein a measurement is taken at least every 5 minutes.

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